

end caps are preferably composed of polypropylene. When the filter medium is composed principally of polysulphone which has been modified to make the medium water-wettable, the first and second end caps are preferably composed of polypropylene.

IN THE CLAIMS:

Cancel claims 10-12 and replace the indicated claims with:

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1. (Amended) A filter assembly comprising a plastics housing providing an inlet port and an outlet port, the material of the housing being such that the assembly can be sterilized by subjecting the interior of the housing to steam under pressure while the exterior of the housing is at atmospheric pressure without damaging the housing, a filter element held in the housing and comprising a filter medium of water wettable material having a central passage extending between first and second ends of the filter medium, the first end of the filter medium being embedded in a first end cap of a plastics material to close said passage and the second end of the filter medium being embedded in a second end cap of a plastics material, said second end cap providing a fluid connection between said passage and one of said ports, the first and second end caps forming respective water-wettable joints with the filter medium.

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2. (Amended) A filter assembly according to claim 1, wherein said embedding involves heating the end caps to soften the end caps and inserting each one of said first and second ends into the associated end cap while the associated end cap is softened.

3. (Amended) A filter assembly according to claim 2, wherein said first and second end cap plastics material is such that the characteristics of the filter medium adjacent to the end caps are not altered by said embedding.

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4. (Twice Amended) A filter assembly according to claim 1, wherein the filter medium is composed principally of PVDF which has been modified to make the medium water-wettable, and the first and second end caps are composed of polypropylene.

5. (Twice Amended) A filter assembly according to claim 1, wherein the filter medium is composed principally of polysulphone which has been modified to make the medium water-wettable, and the first and second end caps are composed of polypropylene.

6. (Twice Amended) A filter assembly according to claim 1, wherein the filter medium is a FLUORODYNE or SUPOR medium and the first and second end caps are composed of polypropylene.

7. (Twice Amended) A filter assembly according to claim 1, wherein the filter medium is composed of a nylon material and the first and second end caps are composed of a polyester or a nylon material.

8. (Twice Amended) A filter assembly according to claim 1 wherein the filter element is integrity testable by the Diffusive Forward Flow Test or by the Water Bubble Point Test.

9. (Twice Amended) A filter assembly according to claim 2, wherein the plastics material of the first and second end caps can be softened at a temperature which is sufficiently low such that the integrity of the filter medium is undamaged when the filter medium is inserted into the first and second end caps when the first and second end caps are at said temperature.

13. (Twice Amended) A filter assembly according to claim 1, wherein the housing resists exposure of the interior of the housing to steam at about 121°C and about 1 bar above atmospheric pressure while the exterior of the housing is exposed to atmospheric pressure.

14. (Twice Amended) A filter assembly according to claim 1, wherein plastics material of the housing is one of polysulphone, PEEK, PEK, polyphenyleneoxide, polyphenylenesulphide, polyethersulphone, polyalkoxysulphone or polyarylsulphone.

15. (Twice Amended) A filter assembly according to claim 1, wherein said filter medium is generally annular, the first end cap being generally disc-shaped and the second end cap being generally annular with a central aperture for connection to one of said ports of the housing.

16. (Amended) A filter assembly according to claim 15, wherein the filter medium is pleated.

17. (Twice Amended) A filter assembly according to claim 15, wherein the second end cap includes a projection defining a fluid path, said projection being received in the associated port to provide fluid communication therebetween.

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18. (Amended) A filter assembly according to claim 17, wherein said housing includes first and second opposed end walls, said housing port in fluid communication with the second end cap being formed in said second end wall, the filter element extending from said second end wall towards said first end wall.

19. (Amended) A filter assembly according to claim 18, wherein the housing has a side wall of generally circular cross-section extending between said first and second end walls.

20. (Twice Amended) A filter assembly according to claim 1, wherein the housing is formed by first and second housing parts connected together.

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21. (Twice Amended) A filter assembly according to claim 19, wherein the housing is formed by first and second housing parts connected together and wherein the first housing part includes said first end wall and said side wall and the second housing part includes said second end wall.

22. (Twice Amended) A filter assembly according to claim 20, wherein the first housing part and the second housing part co-operate to clamp the filter element between said housing parts to hold the filter element in the housing.

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23. (Amended) A filter element according to claim 22, wherein the filter element includes first and second oppositely facing clamping surfaces, the first housing part bearing against the first clamping surface and the second housing part bearing against the second clamping surface.

24. (Amended) A filter element according to claim 23, wherein said first and second clamping surfaces are formed on said second end cap.

25. (Amended) A filter element according to claim 24, wherein the first clamping surface is formed on at least one flange projecting from said second end cap.

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26. (Twice Amended) A filter assembly according to claim 18, wherein the housing is formed by first and second housing parts connected together, wherein the first housing part and the second housing part cooperated to clamp the filter element between said housing parts to hold the filter element in the housing, wherein the filter element includes first and second oppositely facing clamping surfaces, the first housing part bearing against the first clamping surface and the second housing part bearing against the second clamping surface, wherein said first and second clamping surfaces are formed on said second end cap, and wherein said second clamping surface is formed on a portion of said second end cap extending around said projection.

27. (Twice Amended) A filter assembly according to claim 25 wherein said first housing part has a peripheral edge remote from said first end wall, said peripheral edge bearing against said at least one flange to force the second clamping surface against a portion of the second end wall of the housing around the associated port.

28. (Twice Amended) A filter assembly according to claim 1, wherein the filter medium is annular and has a curved exterior surface surrounded by a cage.

29. (Amended) A filter assembly according to claim 28 wherein the cage is formed from the same material as the end caps.

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30. (Twice Amended) A filter assembly according to claim 1, wherein the housing is provided with at least one valve that is manually operable to open and close the valve, the valve when open providing a fluid flow path between the exterior and the interior of the housing.

31. (Amended) A filter assembly according to claim 30, wherein the or each said valve is formed from materials that can be steam autoclaved.

32. (Amended) A filter assembly according to claim 31, wherein the or each valve is such that the assembly can be sterilized by subjecting the interior of the housing to steam under pressure while the exterior of the housing is at atmospheric pressure without damaging the valve.

33. (Amended) A filter assembly according to claim 30, wherein the or each valve is resistant to exposure of the interior of the housing to steam at about 121°C and about 1 bar

above atmospheric pressure while the exterior of the housing is exposed to atmospheric pressure.

34. (Twice Amended) A filter assembly according to claim 30, wherein the or each said valve is formed principally from one of polysulphone, PEEK, PEK, polyphenyleneoxide, polyphenylenesulphide, polyethersulphone, polyalkoxysulphone or polyarylsulphone.

35. (Twice Amended) A filter assembly according to claim 30, wherein the or each valve includes an annular sleeve surrounding a passage generally circular in cross-section, movement of said annular sleeve in one sense opening said valve and movement of the annular sleeve in a sense opposite said one sense closing said valve.

36. (Amended) A filter assembly according to claim 35, wherein the or each passage contains a valve member, movement of the associated sleeve causing said valve member to move between a first position in which said valve member permits flow through said passage and a second position in which said valve member prevents flow through said passage.

37. (Amended) A filter assembly according to claim 36, wherein the or each valve member moves axially relative to the associated passage between said first and second positions.

38. (Amended) A filter assembly according to claim 37, wherein the sleeve and the valve member of the or each valve are connected together, the sleeve surrounding said associated passage and the valve member extending into an end of said passage, said valve member including a passage which is in fluid communication with the associated passage when the valve is open and which is not in fluid communication when the valve is closed.

39. (Twice Amended) A filter assembly according to claim 35, wherein, for the or each valve, a mechanism acts between the sleeve and the housing such that rotation of the sleeve results in axial movement of said valve member between said first and second positions.

40. (Amended) A filter assembly according to claim 39, wherein the or each mechanism limits the extent of the axial movement of the associated valve member.

41. (Twice Amended) A filter assembly according to claim 39 wherein the or each mechanism comprises a pin and a cooperating slot.

42. (Amended) A filter assembly according to claim 41 wherein the or each pin is carried on an exterior surface of the housing and the associated slot extends helically partially around the sleeve.

Add the following claims:

66. (New) A filter assembly according to claim 1, wherein the housing resists exposure of the interior of the housing to steam at about 142°C and at about 2.83 bars above atmospheric pressure while the exterior of the housing is exposed to atmospheric pressure.

67. (New) A filter assembly according to claim 30, wherein the or each valve is resistant to exposure of the interior of the housing to steam at about 142°C and about 2.83 bars above atmospheric pressure while the exterior of the housing is exposed to atmospheric pressure.
